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Can the Euro Be Saved? An Analysis of the Future of the Currency Union◊

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Following the Great Recession, eurozone countries have performed worse than even the currency union's most pessimistic critics had predicted. The paper identifies the strong fundamental flaws in the design of the eurozone and proposes a set of reforms, both in the structure of the eurozone and current policies, which might enable the euro to work. It traces the flaws to economic misconceptions prevalent at the time the euro was designed, some of which continue to predominate. Reform is likely less costly than allowing the euro to break up. The required political will, however, is not in evidence.
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1. - Introduction

Critics of the euro always said that the test would be an asymmetric shock that hit some countries in the euro zone differently from others. Because the euro was not an optimal currency area, the suggestion was that the adjustment to the shock would be painful. If the European Central Bank (ECB) focused its policy on the countries with a strong economy, those with a weak one would go into a recession; if it focused on those with a weak economy, those with a strong economy would face inflation. In fact, the euro countries have performed far more poorly than even these critics suspected. The downturns facing many of the countries are worse than in the Great Depression, and there is no end in sight: even optimists believe it will be years before the countries in depression return to full employment. But the damage done in the meantime will be long-lived: in some of the countries, the most talented young people will have emigrated. Families will be torn apart. Lives will be ruined. The productive potential of millions of young people will be undermined; their life time incomes reduced enormously. So too will the potential growth of the country. Such suffering, all in the name of creating a more prosperous Europe! All in the name of a man-made artifice, of a monetary system. And all of this was unnecessary. Europe was not hit by an earthquake, a natural disaster. This is a man-made calamity that could easily have been avoided.

There is a sigh of relief that the eurozone has not fallen apart, and that at last the decline seems to have come to an end. But the return to growth is a far cry from a return to prosperity. Today, many of the countries of Europe have an output *per capita* (adjusted for inflation) that is well below that before the crisis. (See Table 1).

Even Germany, often touted as the most successful country, has grown at a miserly average annual rate of 0.72 percent from 2009-2013[1], a rate that in other circumstances would be called an utter failure; adjusted for inflation, a rate that is below that of Japan during the last decade of its twenty-year malaise (0.80 percent for 2001-2010[2]), especially once account is taken of the rate of growth of its work force. Japan's working age population (ages 15 to 64) shrank 5.5 percent from 2001 to 2010, while the German working age population shrank 3.6 percent, and the number of Americans of that age increased by 9.2 percent. Thus, the GDP per working age population growth in these countries looks quite different from the growth figures more generally: between 2001 and 2010, Japan's

[1] Data from the IMF World Economic Outlook database of April 2014.
[2] Data from the IMF World Economic Outlook database of April 2014.

GDP per working age population grew 14.2 percent, Germany's grew 12.6 percent, and America's grew just 6.4 percent.[3]

But the failure of the eurozone is deeper than even these numbers would suggest. As the International Commission on the Measurement of Economic Performance and Social Progress has emphasized[4], GDP provides a poor measure of overall economic performance. It does not, for instance, take into account how the fruits of growth are shared: even in Germany, large fractions of the population are seeing a decline in their incomes adjusted for inflation; and in most countries, the standard of living of ordinary workers may be hurt even more than the conventional statistics indicate, as they face more insecurity and cutbacks in public programs which are essential to their well-being.

Looking over the short history of the euro, the good years and the bad, the good countries and the bad, it becomes clear that Europe is far below the trend that it had followed in the years before the euro. The good years do not even come close to compensating for the bad years. (See Graph 1). And the gap between where Europe plausibly might have been, had there been no euro, and where it will be in the future, is only going to grow – at least unless major reforms are made.

Germany likes to lecture the other countries, asking them to do what it has done. But even though its economic model can hardly be called a success, it is based on a strategy that cannot be universally followed. Its growth is based in part on its strong trade surpluses. But not all countries can have trade surpluses: A basic identity has it that the sum of trade deficits must equal trade surpluses.

The failure of the euro is, I believe an almost inevitable result of the structure of the euro. And the flawed structure of the euro was in turn the almost inevitable result of its creators embedding into its design – in its "constitution" – fads and fashions of the time without providing for enough flexibility to respond to changing circumstances and understandings. Many of its features reflected the neo-classical model, with the associated neoliberal policy prescriptions fashionable (in some circles) at the time of the creation of the euro. Even then, the limitations of the neo-classical model had been widely exposed – the problems posed, for instance, by imperfect competition, information, and markets. Likewise, the neo-classical model failed to recognize the many market failures that require government intervention, or in which government intervention would improve the performance of the overall economy.

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3 Based on comparison of data from the World Bank World Development Indicators.

4 Stiglitz J.E., Fitoussi J.P. and Sen A. (2010).

Even with this flawed set of ideas, the euro might have worked, had they gotten certain details right. Details matter.

Based on an analysis of the flaws, I will try to explain why reforms in the structure of the euro are a matter of urgency. It is the structure of the euro that needs to be reformed more than the structure of individual countries. Without these structural reforms, the poor performance of the eurozone is likely to continue, with consequences for years to come.

The structural problems of the euro have, however, been compounded by a critical policy mistake – that of extreme austerity. But for any country to simply abandon fiscal constraints is not the solution. The euro is a Europe-wide project. The problems were *collectively* created. The only solution is a collective solution.

Let me make clear at the onset, that I believe strongly in the Europe project, not only the political project of ensuring peace in a part of the world that had been plagued by two world wars in the last century, but also in the economic project, where one could take advantage of economies of scale, the principles of comparative advantage, and the potential for greater stability to enhance the living standards of all. But good intentions are not enough. As designed, the euro project has not only led to worse overall economic performance, but has also provided a framework in which inequality is likely to grow, with the fruits of whatever limited growth that does occur going to the those at the top. An economic system in which most citizens do not fully share in the fruits of the growth is one that I judge to be a failure.

Let me foreshadow my conclusions: Europe faces a choice. It could make the reforms suggested below, which could help restore shared prosperity and allow Europe and Europeans to live up to their potential. It could carry on as it has been, muddling through, doing the minimum set of reforms that prevent the collapse of the euro, but do not allow for a true recovery, at least not any time soon. One might call this course the course of brinkmanship, giving the countries just enough assistance to maintain their hope, but not enough to support a robust recovery. The danger of brinkmanship is that one sometimes goes over the brink. How that might happen is a subject beyond this brief paper. Nor do I ask, if the euro were to break up, how should it be done in a way that imposes the least cost?[5] Suffice it to say that the breakup will be costly. But we should be clear: the second strategy, muddling through, is also enormously costly. Neither is a pleasant alternative. That is why I have focused on the first course: reforming the euro to make it viable.

[5] The consensus among economists is that Germany should leave the euro, but I do not have space to explain why that is the case here.

But let me reiterate: there is a real urgency to making the reforms. It will not do to say, yes, we know we need a banking union, but we must construct it carefully, and that will take years. With this mentality, these will be years during which the suffering mounts, years during which irreversible damage occurs, years during which the promises of the European project get dashed. In my mind, the consequences of such a course are barely distinguishable from those of muddling through, keeping open the hope of reform in the future to ensure that the euro will not fall apart, but in ways that inflict unconscionable harm on the citizens in the afflicted countries.

2. - Key Misconceptions at the Time of the Founding of the Euro

The euro was a political project, conceived to help bring the countries of Europe together. It was widely recognized at the time that Europe was not an optimal currency area.[6] Labor mobility was limited, the countries' economies were vulnerable to different kinds of shocks, and there were divergent long-term productivity trends.

While it was a political project, the politics was not strong enough to create the economic institutions that might have given the euro a fair chance of success. The hope was that over time, that would happen. But, of course, when national economies were doing well, few felt the impetus to "complete" the project, and when a crisis finally occurred (with the global recession that began in the United States in 2008), it was hard to carefully think through what should be done to ensure the success of the euro.

I and others who supported the concept of European integration hoped that when Greece found itself in crisis, in January 2010, European leaders would display both an understanding of what needed to be done to ensure the stability of Greece and the survival of the euro, and enough commitment to European solidarity to ensure that the requisite steps were undertaken. That did not happen, and, swiftly, a project originally designed to bring Europe together became a source of divisiveness. Germans talked about Europe not being a transfer union – a euphemistic and seemingly principled way of saying that they were uninterested in helping their partners, as they reminded everyone of how they had paid so much for the reunification of Germany. Not surprisingly, others talked about the high price they had paid in World War II, and the enormous German debts that had been forgiven at the end of the War. Selective memories played out, as

[6] See MUNDELL R.A. (1961).

Germans talked about the dangers of high inflation. But was it inflation or high unemployment that had brought on the National Socialist government? Is it inflation or unemployment that will fuel the political unrest that lies ahead?

2.1 *Convergence Criteria*

As I noted, even at its founding, most realized that the eurozone was not an optimal currency area. The hope was that the countries could "converge", and with sufficient convergence, it could become an optimal currency area – or at least a currency area that would work. If the government kept budgets in line (kept deficits and debts within the limit set by the Maastricht Treaty), the member countries' economies would "converge" so that the single currency system would work. The founders of the eurozone apparently thought these budgetary/macro-conditions were enough for the countries to converge, *i.e.*, to have sufficient "similarity" for a common currency to work. They were wrong. But in the aftermath of the crisis, Germany and others were slow to admit that they were wrong: they took the view that it was the *failure* to adequately enforce the terms of the Maastricht Treaty that was to blame. This failure to diagnose the source of the eurozone's problems was inevitably linked to the failure to take actions that would address those problems. (To be sure, it may have been a *willful* failure: it may not have seemed to be in Germany's interest to understand the failures, both those of policy and of the structure of the eurozone, for that might have called upon it to do more than just lecture its partners).

Greece was castigated for its high debts and deficits; it was natural to blame the crisis on profligacy, but again there was selective memory: Spain and Ireland had low debt-to-GDP ratios and a fiscal surplus in the years before the crisis. Therefore, no one could blame these countries' predicament on fiscal profligacy. And no one should hope that insisting on low deficits and debts would prevent a recurrence of a crisis.

The macro-policies forced on the periphery countries by the troika did not lead to convergence. The data clearly show they led to *divergence.* The results were predictable and predicted. Contractionary fiscal policies had contractionary effects. The notion that there could be expansionary contractions was a chimera. While one academic paper[7] championed this view, its analysis was quickly shown to be flawed, both by other academic studies[8] and by the IMF.[9] The economic performance of those countries undertaking austerity were *repeatedly* less than the

[7] See for example ALESINA M. and PEROTTI R. (1995) and ALESINA A. and ARDAGNA S. (2010).

EU and the ECB anticipated – just as the adverse effects of contractionary policies in earlier crises had been underestimated. And with disappointing growth, the improvement in fiscal positions was disappointing too.

One of the reasons that the models underestimated the magnitude of the contraction is that they had not fully internalized what was happening in the financial sector. This is perhaps not surprising: standard models used by central banks in the run-up to the 2008 crisis had demonstrated their inadequacies.[10] We will turn to an analysis of the impacts of the eurozone on financial flows in the next section.

2.2 *Industrial Policy*

While Europe's leaders were clearly wrong in their beliefs about what might lead to convergence – necessary for a single currency system – they actually proscribed policies that might have enabled it to function. The market fundamentalist neoliberal ideology that was in the air at the time of the founding of the eurozone seemed to believe that there are natural forces for convergence in productivity, without government intervention. But the evidence is to the contrary: as we look across countries, there has been remarkably little convergence, and in those countries where there has been convergence (mainly in East Asia), governments have played a pivotal role, through industrial policies. (Indeed, it has been well known that there can be increasing returns to scale and scope (reflected in clustering), the consequence of which is that countries with technological advantages maintain those advantages, unless there are countervailing forces brought about by government (industrial) policies. But European competition laws prevented, or at least inhibited, such policies.[11]

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8 See for example Baker D. (2010) and Jayadev A. and Konczal M. (2010) The few countries that *seemed* to perform well in spite of austerity were small countries, typically with flexible exchange rates, with trading partners expanding demand, so that export growth could fill in the gap caused by the decline in government spending. But after 2008, with most countries facing a downturn, this was unlikely to happen, especially given the ECB's monetary policy (discussed below) leading to a higher exchange rate.

9 See for example International Monetary Fund (Imf) (2010).

10 Subsequently, a large literature has developed explaining why the standard models did so badly. See, e.g. Stiglitz J.E. (2011*a*; 2011*b*) and Blanchard O.J. *et* al. (2012).

11 Even the World Bank has changed its views on industrial policies; yet views about industrial policies are to a large extent enshrined in the eurozone's basic economic framework. See Lin J.Y. (2012); Lin J.Y. and Stiglitz J.E. (2013) and Lin J.Y., Patel E. and Stiglitz J.E. (2013). For a more general theoretical discussion; see Greenwald B. and Stiglitz J.E. (2014).

2.3 *Inflation*

There were other deep misconceptions about economic performance that shaped the rules of the game and the institutions of the eurozone at its founding. Unfortunately, many of these ideas – fads and fashions – are entrenched in treaties, making change difficult at best. The "growth and stability pact" (more aptly called the non-growth and instability pact) restricted fiscal space. A parallel fallacy constrained monetary policy. There was a belief that for good macroeconomic performance it is necessary, and almost sufficient by itself, to have low and stable inflation maintained by the monetary authorities. This led to the mandate of the European Central Bank to focus on inflation, in contrast to that of the Federal Reserve, whose mandate includes not just inflation, but also growth, employment, and (now) financial stability. The ECB mandate can lead to a counterproductive response to a crisis, especially one accompanied by cost-push inflation arising from, say, high energy or food prices. And the policy framework was particularly poorly suited for a global environment in which other central banks had more flexible mandates. While the Fed lowered interest rates in response to the crisis; the continuing inflationary concerns in Europe meant that the Fed's actions were not matched by reductions there. The upshot was an appreciating euro, with downward effects on European output. Had the ECB taken actions to lower the euro's exchange value, it would have stimulated the economy, partially offsetting the effects of austerity. As it was, it allowed the US to engage in competitive devaluation against it.

These beliefs also meant that the ECB (and Central Banks within each of the member countries) studiously avoided doing anything about the real-estate bubbles that were mounting in several of them. This was in spite of the fact that the East Asia crisis had shown that private-sector misconduct – not that of government – could bring on an economic crisis. Europe similarly paid no attention to the run-up in current-account balances in several of the countries, even as the global discourse talked about the dangers of a disorderly unwinding of global imbalances. (Attention was centered on China's surplus and the US deficit, not on Germany's surplus and the deficits in Europe's periphery.)

2.4 *Stability of Markets and Stabilizing Markets*

Ex post, many policymakers admit that it was a mistake to ignore these current-account imbalances or financial market excesses. But the then underlying ideology provided no framework (it still doesn't) for identifying good "imbalances," when capital is flowing into the country because markets have rationally identified good investment opportunities, and distinguishing them from bad ones, *i.e.*, those that are attributable to market excesses.

The long history of crises in capitalist countries should have warned policy makers that markets, on their own, are not necessarily efficient or stable. It was an amazing act of hubris for policy makers in the pre-2008 crisis world to believe that they had "solved" the problems of economic fluctuations! If only they had read Kindleberger's classic study[12], they would have realized that the same hubris had marked policymakers in the run up to earlier crises. The 2008 crisis reminded us *(a)* that markets themselves create the major source of economic disturbances, e.g. credit and asset bubbles; *(b)* that when there is a disturbance (including those caused by the market itself) economic forces are not necessarily self-correcting, at least in a relevant time frame; indeed, they sometimes move the economy further away from a full employment equilibrium. It is only through government policy that these excesses can be controlled – and governments did a good job in the decades between the Great Depression and the ascent of Reagan-Thatcherism. Regrettably, some of the market "reforms" in the last few decades increased the likelihood of an internally generated disturbance, increased countries, exposure to externally generated perturbations, weakened the "automatic" stabilizers, and in some cases, replaced them with automatic destabilizers. Because of the ideological belief that markets were efficient and stable, little attention was paid to how so-called market reforms were affecting the stability of the economy.

In this case, flawed models – with inadequate attention to the financial sector – again contributed to the failure of macroeconomic performance, both in Europe and America. Based on their models, central bankers and other policymakers believed that diversification had so spread risk throughout the global economy that there was nothing to fear, even if the housing bubbles broke. They ignored important work done *before* the crisis showing that diversification and the interlinking of financial institutions might actually make matters worse.[13] More remarkable was their own cognitive dissonance: as they talked about contagion

[12] KINDLEBERGER C. (1978).

[13] See, for example, FREIXAS X. and PARIGI B. (1998); ROCHET J. and TIROLE J. (1996); EISENBERG L. and NOE T. (2001); LAGUNOFF R. and SCHREFT S. (2001); GALLEGATI M., GREENWALD B., RICHIARDI M. and STIGLITZ J.E. (2008); DELLI GATTI D., GALLEGATI M., GREENWALD B., RUSSO A. and STIGLITZ J.E. (2006) and BATTISTON S., DELLI GATTI D., GREENWALD B. and STIGLITZ J.E. (2007). This has been followed by a rash of studies after the crisis, some of which were based on research done before the crisis. See, e.g. STIGLITZ J.E. (2012*a*; 2012*b*); BATTISTON S., DELLI GATTI D., GALLEGATI M., GREENWALD B. and STIGLITZ J.E. (2012*a*; 2012*b*).

after a crisis, they grasped that interlinkages could be a problem.[14] Yet, before the crisis, in discussing the design of economic architectures, they studiously ignored these effects. They should have known the dangers presented by interlinked electricity networks, and how circuit breakers were installed to ensure stability. But again, they opposed the use of the equivalent of circuit breakers in financial flows – capital controls.

Because markets are not self-stabilizing, government has to play a role. The United States recognized that in the Full Employment Act of 1946, more than sixty-five years ago. The United States has an economic framework that deals with most of the problems described earlier: two-thirds of all government expenditures occur at the national level, and the states are restricted (by their own constitutions) from incurring debt, other than for capital projects.[15] Most banks rely on *federal* deposit insurance. States are not restricted from engaging in "industrial policies", and poorer states have actively recruited firms to locate in their jurisdictions.[16]

Europe still does not seem to recognize this.

2.5 *The Feasibility of Internal Devaluation*

The most immediate problem facing the eurozone is that the creation of a single currency took away two of the critical adjustment mechanisms (interest rates and exchange rates) and did not put anything in their place.

Some hoped that internal devaluation would serve as an effective substitute, *i.e.*, domestic wages and prices would fall. But there are three fundamental problems with this solution: *(a)* it is hard to coordinate such decreases, and in the absence of such coordination, there can be large and costly changes in relative prices; *(b)* because debt is denominated in euros, and thus is not contingent on domestic wages and prices, debt burdens increase – with adverse consequences seen in bankruptcies and disruptions of the domestic financial system; there is a common understanding that one of the problems facing many of the advanced countries in the aftermath of the crisis is excessive leverage; but deflation, or even disinflation, increases leverage; *(c)* the decrease in collateral values and incomes (especially relative to debts) would have tightened financial constraints, with first-order adverse effects on the

[14] See, e.g. STIGLITZ J.E. (2010*a*; 2010*b*).

[15] These constitutional requirements have, in recent years, been subverted by the creation of unfunded pension liabilities, which may create within the States some of the same adverse dynamics described below for Europe.

[16] However, this has created, to some extent, a race to the bottom, the adverse dynamic that we describe below as characterizing Europe.

economy. Most importantly, if internal devaluation were an effective substitute for nominal devaluations, then the gold standard would not have been an impediment to adjusting to the disturbances surrounding the Great Depression[17]. In the case of Argentina prior to its 2001 crisis, prices did fall, but not enough –again, an internal devaluation is not a substitute for exchange-rate adjustment.

Greece provides a case in point: in spite of (or more accurately because of) severe austerity, its debt-to-GDP ratio is now higher than it was in 2010, in spite of massive restructurings, in spite of (or more accurately, partly because of) large declines in wages and prices.

An internal devaluation (accompanied by structural reforms, discussed in the next section) was supposed to be a substitute for exchange rate flexibility; the lower *real* exchange rate was supposed to lead to an increase in exports, providing an offset to the reduced government spending associated with austerity. Thus, GDP would be sustained, and at the same time, current account imbalances would be corrected. Graph 2 shows that in fact exports did not increase in most of the afflicted countries in the way that was hoped. Graph 3 shows that there was an improvement in current account balances – mostly the result of the contraction of consumption associated with declining incomes.

2.6 *Structural Reform*

European leaders have recognized that Europe's problems will not be solved without growth. But they have failed to explain how growth can be achieved with austerity. Instead, they assert that what is needed is a restoration of confidence. However, austerity will not bring about either growth or confidence. Europe's sorry record of ultimately failed policies – repeated attempts to fashion patchwork solutions for economic problems it was misdiagnosing – undermined confidence. Because austerity has destroyed growth and lowered standards of living, it also destroyed confidence, no matter how many speeches are given about the importance of confidence and growth. (Seemingly miraculously, Mario Draghi's statement that the ECB would do what it takes has restored confidence in bond markets, *at least temporarily.* We discuss below the question of whether it can or will continue to do so.)

[17] It has been observed that those countries that abandoned the gold standard earlier did better, but this is partly because of the benefits from competitive devaluation. Of course, countries that followed a tight monetary policy in order to garner for themselves more gold suffered. But one could have presumably officially remained on the gold standard, keeping parity with gold, but not pursued such policies.

Structural reform is often a euphemism for a particular form of internal devaluation: lower the power of workers, so that they take wage costs, lowering the cost of labor. There is a certain disingenuousness in such proposals. The European economic project was sold partly on the grounds that it would raise standards of living. Workers are now being told that to make the euro work *(a)* they must take wage cuts; and *(b)* they must accept cutbacks in the basic provision of public services. How then is the euro project supposed to increase workers' incomes – even if does raise those in the financial sector? Workers are told: be patient. In the long run, there will be growth, and everyone will benefit – a variant of trickle-down economics. Anyone in Europe looking across the Atlantic to the American model should not have much hope: the median income of a full-time male worker today is lower than it was 40 years ago. And there is no improvement in sight. And this does not even take into account the increased insecurity that he faces. As Piketty (2014) reminds us, the period in which the capitalist system delivered for most citizens has long past; it was but a short interlude between long episodes in which the capitalist system delivered for the top, and virtually only the top.

By the same token, while *some* structural reforms (but not necessarily those that are being pushed by the troika) will be important for future growth and higher standards of living over the long term for many of the European countries, including those currently afflicted with crisis, structural reforms take time. Structural rigidities did not precipitate the crisis. It was a financial and real estate crisis that did that.[18] Most of the structural reforms are supply side measures, but the problem today is an inadequacy of demand; worse, many of the structural reforms will exacerbate that problem, especially those that lead to lower wages and have adverse distributional effects.

3. - Two Problems That Were Not Fully Grasped

The issues that I described in the previous section were all grasped, at least partially, both by the critics and the advocates of the euro, though obviously to different extents. The advocates were optimistic that the problems that had been pointed out by the critics were less important, or could be fixed. But there were a few additional problems that were not widely recognized, and have played out in important ways in the crisis.

[18] As is the case in the United States, there may be deeper problems: the structural transformation that is required by the decline in manufacturing employment and globalization and the growing inequality which, on its own, lowers aggregate demand.

3.1 *Borrowing in a Foreign Currency*

Since the era of liberalization began, *circa* 1980, the world has been plagued by a plethora of financial/debt crises. Many (though not all) take on a familiar form: the country has borrowed in foreign exchange. Its debts are due. Creditors won't roll over their debts. It can't repay. There is a foreign exchange/debt crisis.

There are many questions associated with such crises: why did creditors lend so much? Why did borrowers borrow so much? Why didn't they foresee the events ahead? Crises are *very* costly. Surely there must be a Pareto efficient renegotiation. Yet such renegotiations often do not occur, or do not occur in a manner that fully forestalls the crisis.

But one thing should be clear: such crises typically do not occur in countries that have borrowed in their own currency. They can at least fulfill their promises by printing more of their own money. The money may not be worth as much as the creditor hoped, but that was a risk that the lender should have understood before he made the loan.

The United States will never have a Greek-style crisis, simply because it can print the money that is owed (a fact that at least one of the rating agencies seems unaware of). The value of those dollars might diminish were it to resort to such measures, but (politics aside) there is unlikely to be any event of sufficient moment to change expectations of inflation so dramatically as to bring on a crisis.

But Greece does not control the printing presses of the currency in which it has borrowed. Europe unwittingly created the all-too-familiar problem facing highly indebted developing countries and emerging markets. It could, of course, have avoided this. Europe as a whole could have borrowed in euros, on-lending the proceeds to the different countries. But it chose not to do that, and in making that choice, it chose to enhance the likelihood of a debt crisis.

This, one might say, was an "accidental" consequence of the creation of a euro, one to which little attention was given before the crisis. More disturbing were aspects of the eurozone that were features that were thought of as *essential* to its success, but were designed in such a way as to ensure its failure. I am referring here to various aspects of the "single market principle" – and the instability of a single market without a banking union.

Confidence in any country's banking system rests partially on the confidence in the ability and willingness of the bank's government to bail it out – and/or in the existence of (1) institutional frameworks that reduce the likelihood that a bailout will be necessary, (2) special funds set aside should a bailout be necessary, and (3) procedures in *place to ensure that depositors will be made whole.* Typically, there is an implicit subsidy from which banks in jurisdictions with governments with greater bailout capacity benefit. Thus, money flowed into the United States after the 2008 global crisis, which failures within the United States' financial system had brought about, simply because there was more confidence that the United States had the willingness and ability to bail out its banks. Similarly, today in Europe, what Spaniard or Greek would rationally keep his money in a local bank, when there is (almost) equal convenience and greater safety in putting it in a German bank?[19] Only by paying higher interest rates can banks in those countries compete, but that puts them at a competitive disadvantage; and the increase in interest rate required may be too great – the bank would quickly appear to be non-viable. What typically happens is capital flight (or, in the current case, what has been described as a capital jog: the surprise is not that capital is leaving, but that it is not leaving faster). But that sets in motion a downward spiral: as capital leaves, the country's banks restrict lending, the economy weakens, the perceived ability of the country to bail out its banks weakens, and capital is further incentivized to leave.

Private austerity compounds the effect of public austerity in a vicious circle. For public austerity itself leads to more defaults and a weaker banking system. And the decrease in lending activity leads to poorer economic performance and unexpectedly poor results from austerity.

The single-market principle for financial institutions and capital, too, can lead to a regulatory race to the bottom, with at least some of the costs of the failures borne by other jurisdictions. The failure of a financial institution imposes costs on others (evidenced so clearly in the crisis of 2008), and governments will not typically take into account these cross-border costs. That is why there either has to be regulation by the host country (see the *Stiglitz Report*, 2010), or there has to be strong regulation at the European level.

The instability of a single labor market without mutualization of debt creates a similar kind of instability. *Free mobility of factors without a common debt leads to inefficient and unstable allocation of factors.* The principle of free mobility is to ensure that factors move to where (marginal) returns are highest, and if factor prices are equal to marginal productivity, that should happen. But what individuals care

[19] The exit from Spanish banks, while significant – and leading to a credit crunch – has been slower than some had anticipated. This, in turn, is a consequence of institutional and market imperfections (e.g., rules about knowing your customer, designed to curb money laundering), which, interestingly, the neo-classical model underlying much of Europe's policy agenda ignored. There is far less of a single market than is widely thought to exist.

about, among other things, is the after-tax returns to labor, and this depends not only on the marginal productivity of labor (the before-tax wage in the neo-classical model) but also on taxes and the provision of public goods. Taxes, in turn, depend in part on the burden imposed by *inherited debt.* This can be seen in the cases of Ireland, Greece, and Spain. All three are facing towering levels of inherited debt (a debt that had not swollen to its current levels by making investments in education, technology, or infrastructure, *i.e.*, through the acquisition of assets, but through financial and macroeconomic mismanagement). This implies migration away from these highly indebted countries to those with less indebtedness, even when marginal productivities are the same; and the more individuals move out, the greater the tax burden on the remainder becomes, accelerating the movement of labor away from an efficient allocation.[20] This migration pattern is exacerbated by the cutbacks in public services associated with austerity and the underinvestment by the government, e.g. in infrastructure, technology, and education. All of these make living in the afflicted countries less attractive, inducing outmigration. (Of course, in the short run, migration may bring positive benefits to the crisis country, as it reduces the burden of unemployment insurance and enhances domestic purchasing power as the remittances from abroad sent by the emigrants roll in. Whether these "benefits" to migration outweigh the adverse effects in the short run, noted above, is an empirical question. The outward migration also hides the severity of the underlying downturn, since it means that the unemployment rate is less, possibly far less, than it otherwise would be).[21]

Moreover, *free migration might result in politically unacceptable patterns of location of economic activity.* The general theory of migration/local public goods has shown that decentralized patterns of migration may well result in inefficient and socially undesirable patterns of location of economic activity and concentrations of population.[22] There can be congestion and agglomeration externalities (both positive and negative) that arise from free migration.[23] That is why many countries have an explicit policy for regional development, attempting to offset the inefficient and/or socially unacceptable patterns emerging from unfettered markets.

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[20] Interestingly, this problem has long been recognized in the theory of fiscal federalism/local public goods. See, e.g., STIGLITZ J.E. (1977; 1983*a*; 1983*b*).

[21] By the same token, if some of the burden of taxation is imposed on capital, it will induce capital to move out of the country.

[22] See, e.g. STIGLITZ J.E. (1977) and TIEBOUT C. (1956).

[23] STIGLITZ J.E. (1977; 1983*a*; 1983*b*).

In the context of Europe, free migration (especially that arising from debt obligations inherited from the past) may result in depopulation not only of certain regions within countries but of certain countries. One of the important adjustment mechanisms in the United States (which shares a common currency) is internal migration; and, if such migration leads to the depopulation of an entire state, there is limited concern.[24] But Greece and Ireland are justifiably concerned about the depopulation of their homelands.

3.2 *Increasing Inequality*

It is now recognized that one of the central problems facing the advanced world is the increase in inequality, but the eurozone framework limits what can be done about this.

Free mobility of capital and goods without tax harmonization not only can lead to an inefficient allocation of capital but can also reduce the potential for redistributive taxation, leading to high levels of after-tax and transfer inequality. Competition among jurisdictions can be healthy, but there can also be a race to the bottom. Capital goes to the jurisdiction that taxes it at the lowest rate, not where its marginal productivity is the highest. To compete, other jurisdictions must lower the taxes they impose on capital, and since capital is more unequally distributed than labor, this reduces the scope for redistributive taxation. (A similar argument applies to skilled labor.) Inequality, it is increasingly recognized, is not just a moral issue: it affects the performance of the economy in numerous ways (Stiglitz, 2012).

4. - The Flawed Policy Response

The previous section argued that there were fundamental problems with the structure of the euro, problems that would inevitably have manifested themselves sooner or later. The global financial crisis of 2008 meant only that the problems became manifested sooner than they might otherwise have become apparent, a short eight years after the launch. It was, indeed, a short spell of "success" for a monetary regime, which often survive decades before their defects become evident.

Some say that at least it worked well for a few years, until 2008. To be sure, as we have noted, the losses since then more than offset the few good years that preceded the crisis. But the problems in the overall economic framework began

[24] Some see an advantage: buying influence over that country's senators becomes less expensive.

well before 2008, and contributed to the crisis: irrationally exuberant markets ignored country risk, as money flowed freely into Greece, Spain, and other countries on the periphery. The dominant ideology did nothing about the bubbles or the current account imbalances. The common currency and the single market gave confidence to the reckless investors. If only the reckless investors bore the consequences of their decisions, that would be one thing. But there are large macroeconomic externalities. Those who set up the eurozone seemed oblivious to these, as they blithely went ahead with an economic framework based on their overconfidence in efficiency and stability.

The difficulties that have been so evident in what can only be called the lost decade that Europe is facing now – a lost decade that may well be translated into a lost quarter century unless something is done – is a result of the compounding of these structural problems with a set of policy failures.

4.1 *Austerity*

Europe's problem today is lack of aggregate demand, and austerity exacerbates that problem.

No large economy – and Europe is a large economy – has ever emerged from a crisis at the same time that it has imposed austerity. Austerity always, inevitably, and predictably makes matters worse. The examples where fiscal stringency has been associated with recovery are for the most part countries where reductions in government spending are offset by increases in exports. These are generally small countries, typically with flexible exchange rates, and where trading partners are growing robustly. But that is hardly the situation confronting Europe's crisis countries today: their major trading partners are in recession, and each has no control over its exchange rate.[25]

We remarked that fiscal profligacy before the crisis was not the cause of Spain and Ireland's collapse: the crisis caused the fiscal crisis, not the other way around. Fiscal stringency would not cure this crisis, let alone prevent the next.

At the same time, even for Greece, it was clear that Germany's prescription – more severe and more effectively enforced budgetary cutbacks – was not going

[25] Alesina A. and Ardagna S. (2010) have tried to propagate the idea that expansionary contractions are possible. But there is a growing consensus that their analyses are badly flawed, and that that is not the case. See, e.g., International Monetary Fund (Imf) (2010); Baker D. (2010) and Jayadev A. and Konczal M. (2010).

to help Greece climb out of its hole. On the contrary, there was every reason to believe that this very prescription would deepen the crisis.[26]

The austerity measures have been particularly ineffective, because the market understood that they would bring with them recessions, political turmoil, and disappointing improvements in the fiscal position, as tax revenues declined. Rating agencies have downgraded countries instituting austerity measures, and rightly so. Spain was downgraded as the first austerity measures were passed: one of the rating agencies believed that Spain would do what it promised, and it knew that that meant low growth and a worsening of its economic woes.

European officials who prescribed austerity suggested when these programs were first adopted[27] that those who adopted them would quickly be on their way to restored prosperity. They have been wrong, and repeatedly so. They have repeatedly underestimated the magnitude of the downturn that their policies would bring about, and as a result, they have consistently underestimated the fiscal benefit that would be derived: deeper downturns inevitably result in lower revenues and higher expenditures for unemployment and social programs. Though they then try to blame the crisis countries for missing the fiscal targets, the fact is that it is their misdiagnosis of the problem and the resulting wrong prescription that should be held accountable.

Spain and Greece are in depression – there is no other way to describe the situation[28] with high unemployment (youth unemployment well in excess of 50%) and income *per capita*, adjusted for inflation, well below the pre-crisis peak – and

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[26] Indeed, by so manifestly showing their profound ignorance of the fundamentals underlying the crisis, the authorities scared the markets. Even if they had understood what was at stake, even if they repeatedly reiterated their commitment to the European project, their display of enormous resistance to undertaking the necessary reforms *in the European framework* surely contributed to the markets' loss of confidence, helping to explain why in the initial phase of the crisis, each of the so-called rescue measures turned out to be only temporary palliatives.

[27] For example, British Conservative David Cameron in his April 2009 speech, "The Age of Austerity", expounded on austerity not as just a short-term strategy but as a philosophical shift that would restore the vibrancy of Britain's economy. Without it, he said, «[W]e risk becoming once again the sick man of Europe. Our recovery will be held back, and our children will be weighed down, by a millstone of debt». The actual results of austerity in Britain have not lived up to his promises.

[28] Economists technically refer to a recession as two sequential quarters of negative growth. In these terms, most of the countries in Europe have moved out of recession. I am using the term "depression" in the less technical sense: an extended period over which unemployment is very high and during which income per capita remains below, possibly significantly so, its previous peak.

that depression is largely a result of misguided policies foisted on these countries (though their own leaders are to blame, for having acquiesced, but only because they belivered, perhaps wrongly, that the proposed "solution" was better than any alternative available to them).

4.2 *Bootstrap Operations: Savings Banks and Sovereigns, Simultaneously*

The immediate symptom of the crisis was the inability of Greece and some of the other countries in the periphery to roll over their debts and to finance their deficit. But it soon became clear that Europe faced a crisis not only in the sovereign debt market, but also in its banking system.

There was something especially peculiar about Europe's attempt at a bootstrap operation, whereby lending to the government would help bail out the banks, and lending to the banks would help bail out the governments.

4.3 *A "Confidence" Game?*

What finally restored stability (but not strong growth) to Europe was the promise of the head of the ECB, Mario Draghi, to do whatever it takes to support the European sovereign bond market. Sovereign spreads came down. The increase in bond values improved the balance sheet of banks. It was a confidence game that was seemingly costless and has worked – at least for a while. No one knows, of course, if a day of reckoning came, in which the ECB would have to support the bond market of a periphery country in the face of a sudden loss in confidence in that country's bonds, whether it could or would do "whatever it takes." As this article goes to press, Draghi's promise has not been put to the test.

Still, it seems a weak reed upon which to rely. What is needed is more than a confidence game.

5. - What Should Be Done?

This analysis of the fundamental flaws underlying the eurozone suggests a set of policies that *might* help resolve the crisis. I say *might*: these reforms are necessary to make the euro work, but they are not necessarily sufficient. The divergence between an optimal currency area and the eurozone – the divergences, for instance, in economic structures that can give rise to desired changes in exchange rates, either in the short run in response to shocks, or in the long run in response to systemic differences in productivity and inflation trends – may be too large to make a system of a single currency work.

In this section, I propose a set of reforms – structural and policy changes – that hold out the promise not only of making the euro survive, but also helping to ensure that the eurozone prospers.

5.1 *Structural Reforms*

The six key structural changes that are necessarily follow directly from our analysis above.

5.1.1 *A Common Fiscal Framework*

The first necessary reform is a common fiscal framework – more than and fundamentally different from an austerity pact, or a strengthened version of the growth and stability pact. As I noted, it was not overspending that brought on Spain's or Ireland's problems.

Addressing the underlying problems of Europe is at its core a *collective action problem* for Europe, requiring Europe-wide resources – more resources than are currently available to the afflicted countries. What is needed is not just funds to support a common agricultural policy, or structural funds for new entrants. What is needed is *solidarity funds for stabilization* – enough funding to help countries facing adverse shocks restore their economies to health.

Funding at the center (compared to those of the separate countries) need not be at the level of the United States, but it needs to be far more than the miniscule level today.

5.1.2 *Mutualization of Debt*

We have explained that under current arrangements, Europe has created the potential for sovereign debt crises simply because it forces countries to borrow in a currency that is not under their own control. What is required then is "mutualization" of debt – Europe-wide debt, owed in euros. This would make Europe's debt similar to America's debt, and with Europe's overall debt-to-GDP *ratio* lower than that of the US, presumably interest rates would be comparable.[29] Such mutualization would lower interest rates, allowing more spending to stimulate the economy and restore growth.

[29] In the third quarter of 2013, the eurozone government debt, according to one standard measure, was 92.7% of GDP (Eurostat data), while the United States had a 101.5% debt-to-GDP *ratio* in the fourth quarter of 2013 Q4 (St. Louis Fed data).

Mutualizaton of debt could be accomplished through a number of institutional mechanisms (Eurobonds, ECB borrowing, and on-lending to nations). How to design such a system (in a way that does not lead to excessive borrowing) would take me beyond the scope of this paper. For now, I simply note: the position of some in Europe against such mutualization – claiming that Europe is a transfer union – is wrong on two counts:

(a) It exaggerates the risk of default, at least the risks of default *if* debt is mutualized. At low interest rates, most of the crisis countries should have no trouble servicing their debts.[30] Of course, in the absence of debt mutualization, there is a serious risk of partial default (which has already happened in the case of Greece). The irony is that existing arrangements may actually lead to larger losses on the part of creditor countries than a system of well-designed mutualization.

(b) Any system of successful economic integration must involve some assistance from the stronger countries to the weaker. (The desirability of such transfers, even in the absence of economic integration, was evidenced by the Marshall Plan after World War II and the large debt forgiveness of Germany by the Allies. More recently, Europe itself has provided substantial funds to new entrants, to enable their economies to converge).

5.1.3 *A Common Financial System (Banking Union)*

The third necessary reform is a common banking system – with deposits insured by a Europe-wide deposit insurance fund, and with common regulations and a common approach to resolution of insolvent banks. I have already explained why a common deposit insurance fund is required: without that, funds will flow from the banking system of "weak" countries to the banks in strong countries, further weakening those already having problems. But without a common regulatory system, a system with a common deposit insurance scheme could be open to abuse.

But a common regulatory system should have scope for taking different macro-prudential stances in different countries, or even in regions within a country. We described earlier how having a single central bank took away an important instrument of adjustment – the interest rate. But there are a host of other regulatory provisions (such as capital adequacy requirements) that can be adjusted according to the macroeconomic circumstances. Lending standards for mortgages should, for instance, be tightened at a place or time where there appears to be the risk of a bubble forming.

5.1.4 *Further Structural Reforms*

There are three further reforms that are desirable and perhaps even necessary if the euro is to survive. One is a move towards tax harmonization, restricting the race to the bottom in capital taxation, and eliminating the distortions caused by tax competition among countries.

A second is a framework that would not just allow, but encourage, industrial policies that would enable those behind to catch up, to prevent further divergences within the countries of Europe.

A third is a change in the mandate of the ECB from its single-minded focus on inflation to a broader mandate that would include growth, employment, and financial stability.

5.2 *Policy Reforms*

These structural reforms are *necessary* for the long-run viability of the eurozone. But they will not be sufficient to restore Europe's economy quickly to health. In addition, there is a set of *policy* reforms. But many of the necessary policy reforms won't work unless they are accompanied by (or preceded by) structural reforms. For instance, today, many are urging the end of austerity. But if a country such as Spain suddenly started spending more, even if its deficits could be financed, current account deficits would increase. There is more than a little chance that these current account deficits would not be sustainable.

The problem is that there needs to be an adjustment of the real (effective) exchange rate. This might be accomplished through internal devaluation, but we have explained why that is not likely to work. The structural and policy reforms need to respond to this reality.

5.2.1 *From Austerity to Growth*

European leaders have recognized that Europe's problems will not be solved without growth. But they have failed to explain how growth can be achieved with austerity. Instead, they assert that what is needed is a restoration of confidence, as if confidence could be created out of whole cloth, simply by giving an impassioned lecture, or by announcing a strategy of deficit reduction. However, austerity will not bring about growth or confidence. Europe's sorry record of ultimately failed policies – after repeated attempts to fashion patchwork solutions for economic problems it was misdiagnosing – have undermined confidence. Because austerity has destroyed growth, it has also destroyed confidence, and will continue to do so, no matter how many speeches are given about the importance of confidence and growth.[30]

The structural reforms that I described earlier – the mutualization of debt and a banking union – would provide space for a return to growth: there could be a mutually reinforcing expansion of government spending on, say, growth-enhancing public investments and private lending that would support private investments.

There are other actions that would be supportive, such as an increase in Europe-wide lending for small businesses, or an expansion of European Investment Bank lending in the afflicted countries. So would be policies that would support, for instance, greater availability of credit in countries in economic downturn (recognizing that it is not just interest rates on government bonds, but the spread between those interest rates and lending rates, and the availability of funds that determines the level of investment). (Greenwald and Stiglitz, 2003).

5.2.2 *Adjustment of Real Exchange Rates*

An *inherent* problem in a single currency area is that the key adjustment mechanisms of interest rates and exchange rates have been removed from the set of available instruments. In the previous paragraph, we have noted that monetary and banking authorities still have other instruments that can affect both the amount of lending and the terms at which such lending is available – instruments that have been underappreciated by monetary authorities.

But as changes in productivity and prices and wages can differ across countries, there needs to be changes in *real exchange rates.* There are two ways that this can be done: internal devaluation for the "overvalued" currencies, and inflation for the undervalued currencies. At an abstract level, these two adjustment mechanisms look similar. In practice, they are markedly different. First, as we noted, internal devaluation represents an increase in leverage, in the real value of the debts in these countries, and thus the hoped-for expansionary benefits may not be realized. By contrast, inflation is a form of deleveraging in the countries with an undervalued currency, and thus has an expansionary effect.

Moreover, there is ample evidence of "downward rigidities" in wages and prices, so in practice, engineering an internal devaluation is far harder than managing limited increases in wages and prices.

[30] There is a persistent view that confidence can be restored if governments cut deficits (spending), and with the restoration of confidence, investment and the economy will grow. No standard econometric model has confirmed these beliefs. On the contrary, the first-order effect of the deficit reduction is a slowdown in the economy, and the slowdown destroys confidence.

The implication of this is clear: Germany should do what it can to induce moderate increases in wages and prices, *e.g.* by passing minimum wage laws. Such policies might, at the same time, address the problems that that country has been facing at the bottom of its income distribution.

5.2.3 *Towards Debt Restructuring*

For most eurozone economies, these reforms would, for now, suffice. But there may be some (like Greece) where the cumulative impact of past mistakes (not only their own past budgetary mistakes, but also those that were forced on them in the early responses to the crisis) is such that more is needed. They will have to restructure their debts.

Debt restructuring is an essential part of capitalism. Every country has a bankruptcy law that facilitates the restructuring of debts in an orderly way. Though after the Argentine crisis, there were calls for the creation of sovereign-debt restructuring mechanisms, one of President George W. Bush's many sins was to veto that initiative. In the subsequent years, when there were no sovereign debt crises, there was little concern about the issue. Elsewhere, I have described what such a mechanism might look like (Stiglitz, 2010*b*). But in the absence of such a mechanism, countries have to act on their own – as Argentina showed was possible.

But if some country needs debt restructuring to enhance growth, it should be done quickly and deeply. And one shouldn't feel too sorry for the creditors: lenders have been receiving high interest rates reflecting such risks.[31] There is some evidence that, on average, they are more than compensated for such risks. By the same token, as we noted earlier, the costs to the economies doing the restructuring may be less than widely assumed. Both theory and evidence suggest that countries that do such restructuring can later regain access to global financial markets, often quickly; but even if, going forward, countries have to rely on their own savings, the adverse consequences may be far less than the benefits they receive from the debt restructuring.

Argentina has also shown that there is life after debt and that there are large benefits to the reform of monetary arrangements. Indeed, there are good reasons to believe that a deep debt restructuring will have positive benefits – providing more fiscal space for expansionary policies, so long as the government does not have a primary deficit. It is important that the debt write-down be deep – otherwise, the lingering uncertainty about the possibility of another debt restructuring

[31] Or they should have done so, had they done their due diligence.

will cast a pall over the recovery. And because of the uncertainty about future growth, and therefore of debt sustainability, GDP-indexed bonds may represent an effective form of risk-sharing (which can be thought of, at the sovereign level, as the equivalent of the conversion of debt into equity, at the corporate level – see Miller and Zhang, 2014; Griffith-Jones and Hertova, 2013 and Barr, Bush, and Pienkowski, 2014).[32 33]

6. - Concluding Comments

I have described how the current regime has led much of Europe into a state of depression, with high unemployment and incomes still below pre-crisis levels. As this article goes to press, Europe is celebrating its emergence from recession. It is heralding the end of recession as proof that the austerity framework has worked. But there is a big difference between the end of recession and a robust recovery. There is little hope that the countries that are in depression will return to full employment any time soon, or even that their economies will soon return to pre-crisis levels of GDP *per capita*. We should not let our aspirations respond to the dismal record of the past several years: Even the best performing country, Germany, would have been given a failing grade in normal times. As we have pointed out, adjusted for the growth in labor force, Germany's performance is poorer than that of Japan, long noted for its extended and disappointing malaise. When account is taken of the declining incomes in large parts of its population, its performance looks even more dismal.[34]

6.1 *Undermining Democracy*

The current regime is also undermining the legitimacy of democratic economic institutions. The European project was a top-down initiative. There was a *very*

32 As SANDLERIS G. (2012) points out, the costs may be less related to those imposed externally, and more related to failures of the government to deal effectively with the internal disturbances associated with debt restructuring, e.g. to the financial system (banking, insurance, and pensions).

33 For a broader discussion of the role of debt restructurings in dealing with debt crises, see HEYMANN D. and STIGLITZ J.E. (2014).

34 And as we have also pointed out, even this dismal performance is not one that provides a model for others: it was based on persistent surpluses. By definition, not all countries can run surpluses. A basic law of economics is that the sum of deficits must equal the sum of the surpluses, so not every country can run surpluses. When all try to run surpluses, the paradox of thrift sets in: there is a deficiency of aggregate demand, and the entire world suffers.

short period of prosperity[35] – based in some countries on access to credit at irrationally low interest rates. The promises of *sustained* prosperity were not delivered upon. The rules of the game not only failed to deliver on sustained macroeconomic growth, they also have led to widening inequality, with governments restrained in their ability to redress growing inequities. Evidently, the elites created a system that seems to have done well only for those at the top.

In many quarters, there is concern about the ceding of effective economic power – originally to Brussels's bureaucrats, but increasingly to German politicians, undermining national democracies.

6.2 *Undermining the European Project*

There is widespread confusion between the European project and the euro: one can have close economic integration *without* sharing a common currency. One cannot share a common currency without having close economic integration. A critical failure of Europe's leaders was that they believed they could use a single currency to propel deeper economic integration. The response to the crisis has not been to strengthen European solidarity, but rather to expose the fissures.

6.3 *Urgency*

The incongruence between the pace of markets and that of the politics could present a separate problem for the survival of the euro. Many European leaders, for instance, have recognized that *eventually* a single banking framework, with common regulations, deposit insurance, and resolution, will be necessary. But others argue that such a dramatic reform must be done carefully, in a step-by-step process. First, there must be common regulations, and when the regulatory system has been "proven," Europe can go on to the next stage(s). Were there not an ongoing crisis, such an argument would have some merit. But those with capital in, say, the Spanish banks will not wait: the benefits of waiting are nil, the risks are substantial. And so, while European leaders dither, the banking systems in the afflicted countries will weaken, and with the weakening of the banking system, there will be a weakening of the economies – exacerbating the adverse effects of austerity.[36]

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[35] Monetary arrangements often have a short life span – witness the ERM. Even the Bretton Woods system (fixed exchange rates) lasted less than three decades.

[36] The slow pace of reforms has led to other problems: Ireland, one of the first countries to receive assistance, became concerned that later countries will get a better "deal."

We have repeatedly noted that the effects of these mistaken policies are likely to be long lived. Europe's future potential growth is being lowered as a result of the mistakes being made today. There are important hysteresis effects: the generation entering the labor force today will not be building up their skills, creating the human capital, that would make them more productive in later years.

6.4 *The High Price of the Euro*

The crisis in Europe is manmade. It has not been caused by a famine or some other natural disaster. Indeed, there was no sudden change in the underlying state variables describing the European economy, no war that wiped out large portions of its physical and human capital stock, not even an innovation or an economic transformation that would have led to rapid obsolescence of its capital stock. There have, of course, been sudden changes in expectations, and in our understandings: we know (or at least we *should* now know) that markets are not necessarily quickly self-correcting, that under-regulated markets can give rise to bubbles and credit excesses, that Greece or Spain having the same currency as Germany does not mean that Greek or Spanish debt is as safe as that of Germany, and it may not even fully eliminate exchange-rate risk and, in ways that we have explained, may actually increase default risk.

Crises are complex events, and it is inevitably overly simplistic to find a single-cause explanation. Still, it should be clear that the euro crisis, like so many other crises, is more attributable to market excesses than to government profligacy. The excesses occurred not just in Europe but perhaps even more in the United States. If government is to be blamed, it is for a failure to tame the (repeated) market excesses. Prevention entails understanding how to curb the excesses, and how to design institutional arrangements that limit the opportunity for such excesses. The creators of the eurozone, reflecting the ideology of the time, worried about the wrong problem: they focused on government failures, when the real source of the crisis was in the private sector.

Thus, the euro crisis is the result of unstable market processes embedded in a flawed set of institutional arrangements and policy frameworks created in of the pre-crisis years which increased the likelihood of the occurrence of crises and enhanced the consequences of any crisis that did occur. Government policies can affect countries' exposure to risk and the structural stability of the system (the extent to which there can be market excesses) as well as impede or facilitate adjustments. Deregulation and financial and capital-market liberalization have provided new opportunities for destabilizing market processes and opened up new channels by which the instabilities in one country can affect others (Stiglitz *et* al., 2006). Worse still, the *design* of the eurozone did not buffer shocks, but rather amplified them: the system was inherently unstable in a number of dimensions. The elimination of automatic stabilizers, and their replacement in some cases by automatic destabilizers, has introduced new instabilities into the economic system.

We have seen how institutional changes surrounding the eurozone – intended to create a more stable and prosperous economy – played out in ways that were, at the time of the founding of the Euro, largely unanticipated, but which – at least in hindsight – were totally understandable given the structural flaws in the eurozone's institutional arrangements.

The same kind of flawed reasoning that led to these structural flaws – fundamental flaws in the economic framework for the eurozone – also contributed to the flaws in the response to the crisis once it became evident. The ability of the countries to adjust to a man-made shock was inhibited, and nothing was put in its place. The central issue in the resolution of a crisis is to understand how to ensure that, after a crisis, resources are put back to use as quickly as possible. Resources were wasted by the private sector before the crisis, say in the real estate bubbles in Ireland and Spain. But this private sector waste of resources is dwarfed by the waste of resources that has occurred *after* the crisis, as the eurozone went into recession, as some of the countries went into depression, and as the region as a whole did not live up to its potential.

The governments of Europe should have realized that market forces by themselves may not only lead to endogenous disturbances (like bubbles), but may respond to shocks in a destabilizing way. Government intervention (*e.g.*, through debt restructuring, countercyclical macro-policies, and well-designed bank recapitalizations) can reduce the enormous costs that have traditionally been associated with crises. But the actions of Europe have been the opposite: they have increased the costs – the depth of the downturn, the extent, and the duration.

Crises are perhaps an inherent feature of capitalism. But they do not have to be as frequent, as deep, and as costly as they have been. The standard macroeconomic models ignored history – which had shown that capitalism had been marked by large fluctuations, with great suffering, since the start. The models equally ignored key market failures that help explain persistent inefficiencies and instabilities. In doing so, policymakers using those models may have violated the central principle of Hippocrates: do no harm. The policies and institutional arrangements based on these simplistic models and theories created the pre-conditions for the euro crisis. Had America not managed its financial system so badly, it is conceivable that the euro might have had a few more "good" years. But I have argued that there were deep inherent problems: it was essentially inevitable that eventually the eurozone would have faced a crisis. It is conceivable that by allowing the excesses and imbalances to have continued, the crisis that would have then ensued would have been even worse.

The same flaws in reasoning that led to the poor design of the eurozone led to a misdiagnosis of the roots of the crisis and that in turn led to the flawed policy response, which in turn have contributed to the slow recovery from this Great Recession – a downturn that, while not as deep as the Great Depression, may begin to rival it in duration.

The original hope of the euro can be restored. But it will not happen on its own. It won't happen if the leaders of Europe continue to blame the victims, the countries that are suffering from recession and depression. It will only happen if they recognize the fundamental flaws, both in the institutional arrangements and the policy frameworks, and make the requisite reforms that I have discussed.

Table 1

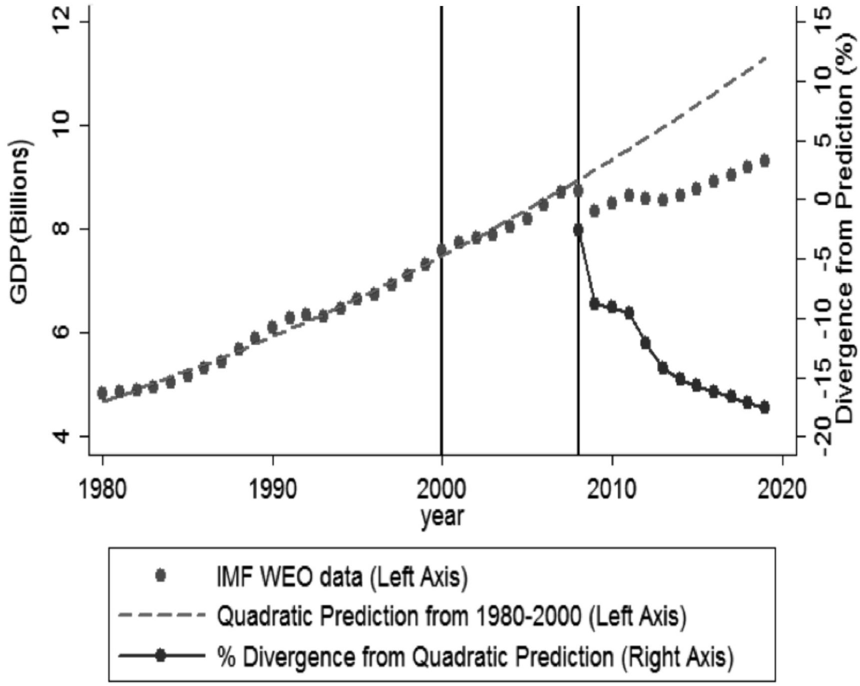
GDP *PER CAPITA*, CONSTANT 2013 US $

	GDP *per capita*, 2007 or peak	GDP *per capita*, 2012
France	41,727	40,841
Germany	43,501*	44,706
Greece	27,950	22,160
Italy	37,292	33,846
Spain	32,368	30,120
United Kingdom	47,745	45,148
United States	52,049	51,366

*Germany data is for 2008, its pre-crisis peak year.
Source: World Bank.

GRAPH 1

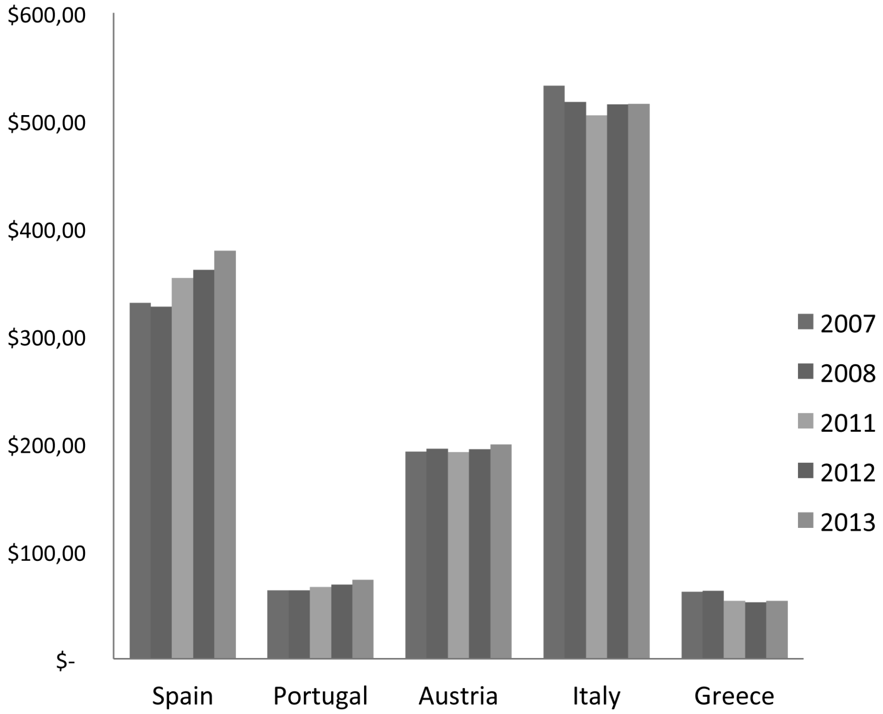
EURO ZONE
(EXCLUDING ESTONIA, LATVIA, MALTA, SLOVAK, SLOVENIA DUE TO INCOMPLETE DATA)



Source: IMF data and Author's calculations.

GRAPH 2

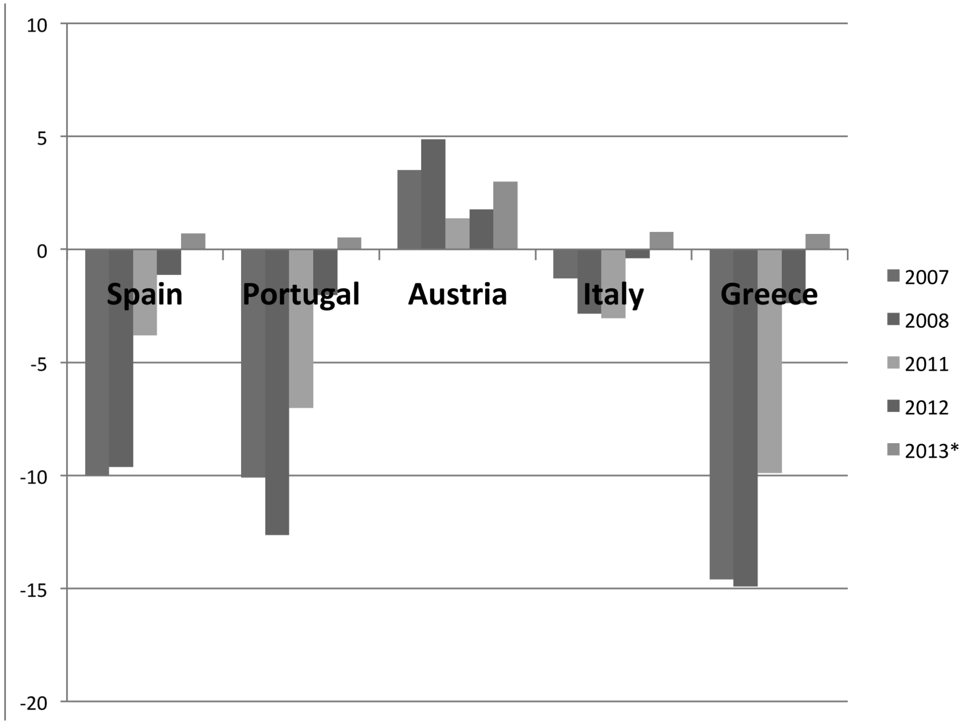
EXPORTS OF GOODS AND SERVICES
(BILLIONS)



Source: Data from the World Bank for all years except 2013. Note that 2013 values are estimated based on growth rate data from IMF WEO. Quantity values are expressed in constant 2005 USD, which is the baseline year in which the World Bank reports its data.

GRAPH 3

CURRENT ACCOUNT BALANCE
(% OF GDP)



*2013 data for Italy and Portugal are estimates.
Source: IMF.

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